bio-protocol Preprint

Not Peer Reviewed
Ask a question online

Computational methods

Lizhi Liu Sheng Chen

Updated date: Mar 15, 2021

An abbreviated version of this protocol was published in Science Advances in Jul 2020

Mechanical penetration of β-lactam–resistant Gram-negative bacteria by programmable nanowires

DOI: 10.1126/sciadv.abb9593

Detailed protocol

Hi,
Thanks for your interest. In our study, the bacteria are modeled as the elastic shell, a model in the solid mechanics modules in COMSOL. The geometrical model and the parameter settings are available in the main text. If you have any questions about this model in COMSOL, you can get help from the reference manual of the elastic shell in COMSOL. In addition, this publication (Physical Review Letters, 2011, 107, 158101) includes some details about the modeling basis, which could be helpful for your understanding of this model.
All the best,
Lizhi Liu

How to cite:(Readers should cite both the Bio-protocol preprint and the original research article where this protocol was used)

1. Liu, L. and Chen, S. (2021). Computational methods. Bio-protocol Preprint. bio-protocol.org/prep931.
2. Liu, L., Chen, S., Zhang, X., Xue, Z., Cui, S., Hua, X., Yang, B., Yan, H., Liu, C., Wang, J., Zhang, Z., Yu, W., Wu, F., Xu, W., Lehto, V., Yue, T., Liu, Y., Yu, Y., Wang, T. and Wang, J.(2020). Mechanical penetration of β-lactam–resistant Gram-negative bacteria by programmable nanowires . Science Advances 6(27). DOI: 10.1126/sciadv.abb9593